REMARKS

Claims 6 - 11 are pending in this application. By this Amendment, claims 6 and 11 have been amended. The applicants respectfully submit that no new matter has been added. It is believed that this Response is fully responsive to the Office Action dated October 26, 2001.

35 U.S.C. §112, First Paragraph, Rejection:

Claim 11 stands rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This rejection is respectfully traversed.

Applicants respectfully assert that the amendment to claim 11overcomes the rejection of claim 11 under §112, first paragraph. Accordingly, withdrawal of the rejection of claim 11 under 35 U.S.C. §112, first paragraph is respectfully solicited.

As To The Merits:

As to the merits of this case, the Examiner sets forth the following rejections:

1) claims 6-11 stand rejected under 35 U.S.C. §102(e) as being anticipated by **Canning et al.** (U.S. Patent No. 5,783,465); and

2) claims 6-11 stand rejected under 35 U.S.C. §102(e) as being anticipated by **Chigawa et al.** (U.S. Patent No. 6,172,422).

Both of these rejections are respectfully traversed.

Significant structural arrangements of the Applicants' claimed invention, as amended, now include that an end of each of the bumps has a diameter smaller than other portions of the bump so as to facilitate deformation of the pad when the bumps are pressed against the pads and to form a space in which the insulating adhesive is filled.

The applied references of **Canning** and **Chigawa** fail to disclose or fairly suggest the significant structural arrangements of the Applicants' claimed invention concerning an end of each of the bumps that has a diameter smaller than other portions of the bump so as to facilitate

deformation of the pad when the bumps are pressed against the pads and to form a space in which the insulating adhesive is filled.

That is, the shape of the bumps is clearly illustrated in Fig. 2 of the present application. Neither the **Canning** or **Chigawa** references disclose the configuration of the bumps shown in Fig. 2 of the present application.

Since the bump has the small-diameter end, the bump can be more easily pressed into the pad, which makes a firm joint between the bump and the pad.

Additionally, an appropriate amount of the insulating material can be positively filled between the bumps, and the insulating material can be uniformly transferred to the space between the bumps. Further, the space between the bumps serves as a buffer for storing the insulating material that is excessively transferred to the semiconductor device. In particular, the insulating material effectively prevents a short-circuit between adjacent terminals when the bumps are arranged with a small pitch.

In view of the aforementioned amendments and accompanying remarks, claims 6-11, as amended, are in condition for allowance, which action, at an early date, is requested.

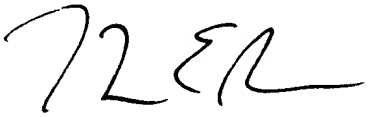
Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**".

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



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Enclosure: Version With Markings To Show Changes Made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 6 and 11 have been amended as follows:

6. (Amended) A structure comprising:

a semiconductor device having bumps;

a board having pads so that each of the bumps is joined to a corresponding one of the pads, each of the pads having a deformed portion with which a corresponding one of the bumps contact; and

an insulating adhesive provided between the semiconductor device and the board, wherein

an end of each of the bumps has a diameter smaller than other portions of the bump so as to facilitate deformation of the pad when the bumps are pressed against the pads and to form a space in which the insulating adhesive is filled, and wherein

contraction of the insulating adhesive maintains joints of the bumps and the pads, said joints being made by deformation of the pads.

11. (Amended) A structure according to claim [6] 8, wherein

a member between said semiconductor device and said [board] head is provided, said member having a thermal characteristic of delaying transmission of heat, and

a heat treated at a temperature at which said insulating adhesive is hardened presses said semiconductor device on said board so that each of said bumps is pressed on a corresponding one of said pads, wherein pressure of said bumps against said pads reaches a predetermined value which plastically deforms said pads before a temperature of said insulating adhesive to which heat is supplied from said head reaches temperature at which said insulating adhesive is hardened.